

Claims

1. A complex coacervate encapsulate comprising a lipophilic core and a hydrophilic wall, wherein the wall substantially covers the core, characterized in that the wall substantially consists of beta-lactoglobulin and one or more polymers having an isoelectric point below that of beta-lactoglobulin.
2. A complex coacervate encapsulate according to claim 1, wherein the ratio (w/w) of beta-lactoglobulin to the total of one or more polymers having an isoelectric point below that of beta-lactoglobulin is 1-5.
3. A complex coacervate encapsulate according to claim 1 or 2, wherein the polymer having an isoelectric point below that of beta-lactoglobulin comprises a caseinate or a casein derivative.
4. A complex coacervate encapsulate according to any of claims 1-3, wherein the lipophilic core is oil or an oil comprising oil-soluble compounds.
5. A complex coacervate encapsulate according to any of claims 1-4, wherein the composition of the coacervate consist of materials that are edible and applicable in foodstuffs.
6. A complex coacervate encapsulate according to any of claims 1-5, wherein the complex coacervate encapsulate is stable upon preparation, processing and storage of the food formulation.

7. A complex coacervate encapsulate according to any of claims 1-6, wherein the wall is crosslinked.
8. A complex coacervate encapsulate according to claim 7, wherein the wall is crosslinked with transglutaminase.
9. A complex coacervate encapsulate according to any of claims 1-8, wherein the average particle size of the encapsulate is 50 μm or less.
10. A complex coacervate encapsulate according to claim 9, wherein the average particle size of the encapsulate is 25 μm or less.
11. Food composition comprising complex coacervate encapsulates according to any of claims 1-10.
12. Food composition according to claim 11, wherein the complex coacervate encapsulates are present as aggregates.
13. Food composition according to claim 12, wherein the preferably average particle size of the aggregates is between 10 and 100 μm .
14. Food composition according to claim 11, wherein lipophilic core is retained inside the hydrophilic wall during processing and/or storage, but is released upon digestion in the gastro-intestinal tract of mammals.

18

15. Process for the preparation of a complex coacervate encapsulate, wherein an emulsion of an oil-phase in an aqueous solution or dispersion of beta-lactoglobulin and one or more polymers having an isoelectric point below that of beta-lactoglobulin is subjected to a pH change, such that a complex coacervate encapsulate of beta-lactoglobulin and polymer is formed.
16. Process according to claim 15, wherein the polymer is caseinate or a casein derivative.
17. Process according to claim 16, wherein the complex coacervate is crosslinked using a crosslinking agent.
18. Process according to claim 17, wherein the crosslinking agent is transglutaminase.